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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/681,246

10/09/2003

Terumi Nakazawa

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08/10/2005

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,246	NAKAZAWA ET AL.	
	Examiner	Art Unit	
	Isam Alsomiri	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-17 is/are rejected.
- 7) ☒ Claim(s) 6 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 7-17 are rejected under 35 U.S.C. 102(b or e) as being anticipated by any one of Schmidt et al. US 6,600,103 or Uematsu et al. US 6,130,640.

Re claims 1, 5, and 16, Schmidt discloses in figures 1-8 a vehicle-mounted millimeter wave radar device that detects objects by sending out millimeter waves, comprising: a millimeter wave generation means for generating millimeter waves; an antenna means for sending out the millimeter waves; a substrate that is provided with wiring 10 and the millimeter wave generation means; an enclosure 12 and 13 that is joined to the substrate to enclose the millimeter wave generation means and the surrounding space on the substrate in cooperation with the substrate; and a resin that covers 1 and 8 the joint between the enclosure and the substrate at least (see Abstract, see col. 3 lines 16-27). Also, Uematsu disclose in figure 9 a vehicle-mounted millimeter wave radar device that detects objects by sending out millimeter waves,

comprising: a millimeter wave generation means for generating millimeter waves 110; an antenna means 125 for sending out the millimeter waves; a substrate that is provided with wiring 10 and the millimeter wave generation means; an enclosure 150 that is joined to the substrate to enclose the millimeter wave generation means and the surrounding space on the substrate in cooperation with the substrate; and a resin (see col. 12 lines 27-30) that covers the joint between the enclosure and the substrate at least (see Abstract).

Re claim 2, it is inherent to have means for preventing outflow of the resin (see Schmidt figures 7-8, col. 3 lines 16-27), wherein the antenna means is provided on a surface of the substrate opposite to the surface mounting the millimeter wave generation means. Furthermore,

Re claims 3, 12, and 17, Uematsu teaches the space is filled with an inert gas (see col. 11 lines 42-45, col. 7 lines 45-48).

Re claims 4, 11, it's implicit that the enclosure includes means for moisture absorption (for protecting the circuits). (see Uematsu col. 12 lines 28-30; see Schmidt col. 3 lines 16-27)

Re claim 7, Schmidt teaches the conductive material [2, 29], and the insulation material for connectors [9] (see figure 8, col. 4 lines 35-45). Uematsu teaches the case is made of a conductive material; the circumference of the input/output signal terminals is made of an insulation material, and the input/output signal terminals are put through the case with the insulation material (see figures 9 and 12, Abstract).

Re claim 8, Schmidt discloses in figure 8 the multilayer substrate is integral with the case [2, 29]. Uematsu teaches the multilayer substrate is integral with the case (see figure 9).

Re claim 9, Schmidt teaches the claimed multilayer substrate and the patch antenna (see figure 1-8, col. 2 lines 4-18). Uematsu teaches the MMIC is provided on the multilayer substrate, and a separate member 128 forms the patch antenna 125 circuit.

Re claim 10, Uematsu teaches the multilayer substrate is not planar structure but shaped so as to contain a space, and wherein a flat cover 150 is joined to the multilayer substrate so as to provide a hollow storage space for the MMIC (see figure 9). Also see Schmidt (figure 1-8, col. 2 lines 4+)

Re claim 13, it's inherent the multilayer substrate is made of either an inorganic material or an organic material.

Re claim 14, it's inherent the hollow cap 150 and 141 and the multilayer substrate are joined by an organic material using as an adhesive.

Re claim 15, Schmidt teaches a gelled moisture resistance resin (see col. see col. 3 lines 16-27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al. US 6,600,103 in view of Uematsu et al. US 6,130,640.

Re claims 3, 12, and 17, Schmidt is silent about the space being filled with an inert gas. Uematsu teaches a similar device wherein the space is filled with an inert gas (see col. 11 lines 42-45, col. 7 lines 45-48). It would have been obvious to modify Schmidt's system to include the inert gas for circuit (ICs) protection.

Allowable Subject Matter

Claims 6 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed May 23, 2005 have been fully considered but they are not persuasive. Applicant argues that neither reference to Schmidt or Uematsu disclose a moisture resistant resin for covering a joint between the enclosure and the substrate. In Response: Regarding the Schmidt reference, the cover it self is made of a moisture resistant resin since it is made of plastic (see Abstract), and secondly all the parts are cover with a further moisture resistance resin (see col. see col. 3 lines 16-27). Regarding the Uematsu reference (see col. 12 lines 27-30). Therefore, the rejections are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

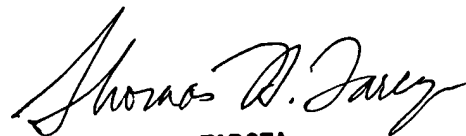
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



August 7, 2005



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600